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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,682	02/20/2004	Harvey A. Restaino	C382.12-0146	6991
27367 7590 06/07/2007 WESTMAN CHAMPLIN & KELLY, P.A. SUITE 1400 900 SECOND AVENUE SOUTH MINNEAPOLIS, MN 55402-3319			EXAMINER BERHANU, SAMUEL	
			ART UNIT 2838	PAPER NUMBER
			MAIL DATE 06/07/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/783,682

Applicant(s)

RESTAINO ET AL.

Examiner

Samuel Berhanu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

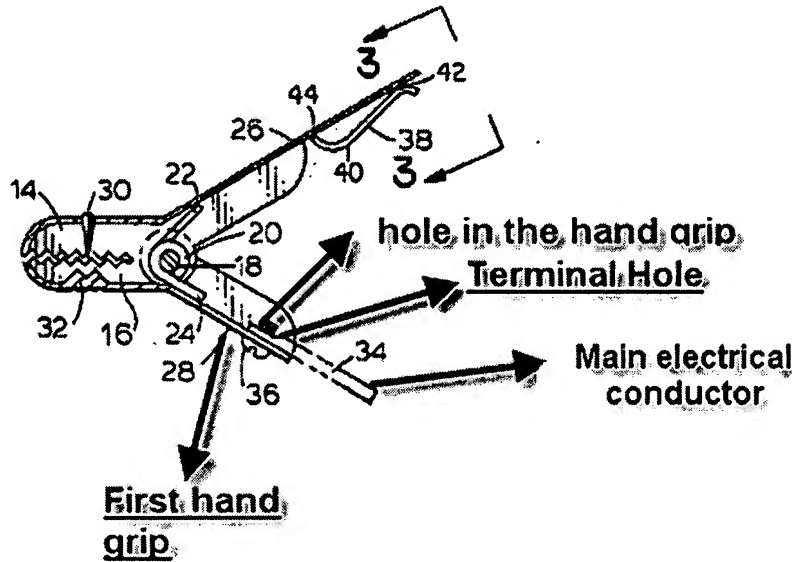
2. Claims 1 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA), in view of Polizzano (US 4,057,313),

Regarding claims 1 and 18, APA discloses in Figure 1, a cable (124) including a main electrical conductor (the wire carrying the current can be consider as a main electrical conductor); a main electrical conductor capable of carrying a charging current and first and second electrical conductors, when at least one of first and second electrical conductors provide a Kelvin connection capability for injecting a forcing function into the battery and measuring a voltage across the battery (Please see figure 1 and page 14, lines 3-17 of applicant's specification)

a first elongate clamp member (102) having a first jaw end (106) and a first hand grip end (110) separated by a first pivot coupling (see page 13, lines 22-29 of applicant specification), the first elongate clamp member having a conductive piece (136) coupled to the first jaw (106) end for making contact with a contact of the battery; a second elongate clamp member (104) having a second jaw end (108) and a second hand grip end (112) separated by a second pivot coupling

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(116) (noted that both the jaws and the hand grips separated by pivot point), the second elongate clamp member pivotally joined to the first elongate clamp member by the first and second pivot couplings (116) whereby the first and second jaws are generally aligned together (please see page 14, lines 3-17 of applicant disclosures; APA does not disclose explicitly, the first hand grip having a first hole formed therein and a terminal electrically coupled to the main electrical conductor having a terminal hole formed therein aligned with the first hole in the first hand grip; and a removable fastener which couples the terminal to the first hand grip through the first hole and the terminal hole whereby the first hand grip can be disconnected from the main electrical conductor. However, Polizzano discloses in Figures 1-2



the first hand grip (28) having a first hole (the rivet 36 passes through the hole of the clamp) a terminal (the end portion of cable 34) electrically coupled to the

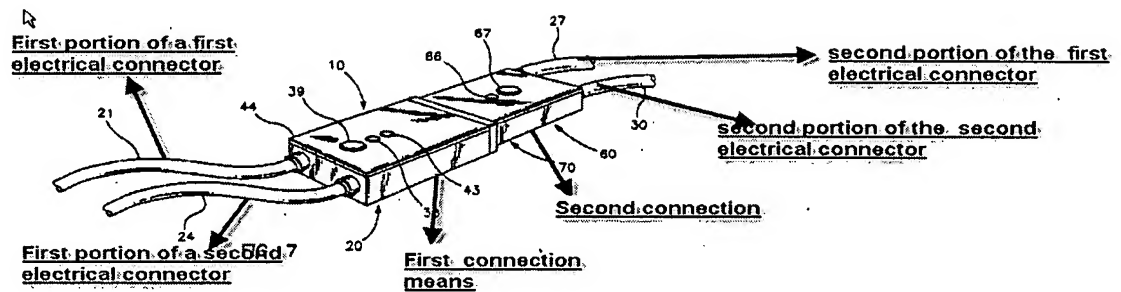
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cable (348) having a terminal hole (the pivot fastened position on the cable) formed therein aligned with the first hole in the first hand grip; and a removable fastener (36) which couples the terminal to the first hand grip through the first hole and the terminal hole whereby the first hand grip can be disconnected from the cable. It would have been obvious to a person having ordinary skill in the art at the time of the invention to substitute APA's clamp assembly and secure the cable in the handle portion with a removable fastener means as taught by Polizzano in order to ensure a reliable secure mechanical and electrical

3. Claims 2 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Polizzano (US 4,057,313), and further in view of Johnson (4,969,834) and in view of Moenkhaus et. al. (US 6,500,025).

Regarding Claims 2 and 19, neither APA nor Polizzan discloses the apparatus including a first electrical plug electrically coupled to the clamp through first and second wire connectors of the clamp and a second electrical plug electrically coupled to the first and the second electrical conductors of the cable, the first and second plugs configured to removably electrically couple together. However, Johnson discloses in Figure 4

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the apparatus including a first electrical plug (connection 20) electrically coupled to the clamp and a second electrical plug (83) electrically coupled to the cable, the first and second plugs configured to removably electrically couple together (Column 4, lines 66-68, Column 5, lines 1-8). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify APA's clamp assembly and add a plug as taught by Johnson in order to provide reliable connection between the cable and the clamp. Johnson does not disclose explicitly, the connection means is a plug. Moenkhaus et. al. disclose that a plug can be used as a cable connection means (see abstract and Figure 6). It would have been obvious to a person having ordinary skill in the art at the time of the invention to use a plug as connecting means as taught by Moenkhaus et. al. in APA's clamp assembly in order to provide series or parallel cable connections

Regarding Claim 20, Johnson discloses, in Figures 4 and 8 wherein removably connecting the first and second electrical plugs (20,83) comprises: electrically connecting a first wire connector coupling the first plug to the clamp and a second wire connector coupling the first plug to the clamp to the cable

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through the second plug (Noted that Johnson's electrical connections of the clamp and the plugs are similar as applicant's connection).

4. Claims 3 and 7-8, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Polizzano, and further in view of Kowalski et al. (US 5,772,468).

Regarding Claims 3 and 22, neither APA nor Polizzan discloses explicitly, the cable includes a main electrical connector electrically coupled to the terminal and capable of carrying a high current. Kowalski et al. disclose, the cable (48) includes a main electrical connector electrically coupled to the terminal and capable of carrying a high current (Column 5, lines 66-67). It would have been obvious to a person having ordinary skill in the art at the time of the invention to substitute APA's cable with a high current carrying cable as taught by Kowalski et. al. in order to avoid power loss on the wire due to heat.

Regarding Claim 7, Kowalski et al. disclose in Figure 3 a spring (26) coupled to the first and second elongate clamp members configured to urge the first and second jaws together to a closed position (Column 4, lines 40-43).

Regarding Claim 8, Kowalski et al. disclose, the first hand grip and the second hand grip are covered with an insulating material (Column 2, lines 59-67).

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Polizzano (US 4,057,313), as applied to Claim 1 above, and further in view of Vonderhaar et al. (US 6,469,511).

Regarding Claim 6, neither APA nor Polizzano discloses, wherein at least one of the first electrical conductor and the second electrical conductor provides

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a sensor lead for sensing a physical property of the battery. However, Vonderhaar et al. disclose in Figures 7 and 8 wherein at least one of the first electrical conductor (720) and the second electrical conductor (722), wherein at least one of the first connector and the second connector provides a sensor lead for sensing a physical property of the battery (720, Column 5, lines 10-15, Column 5, lines 1-26). It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a voltage monitoring means as taught by Vonderhaar et al. in APA's clamp assembly in order to monitor status of a battery.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Polizzano as applied to Claim 1 above, and further in view of Yoshikawa et. al. (US 4,983,086).

Regarding Claim 9, neither APA nor Polizzano discloses explicitly, the terminal comprises a tin-plated ring. However, Yoshikawa discloses in Figure 4 and paragraphs 58, 62 and 66, the terminal comprises a tin-plated ring. It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify APA's cable in order to have a thin-plated ring terminal as taught by Youshikawa in order to provide a hole as a securing means for the cable.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable APA in view of Polizzano as applied to Claim 1 above, and further in view of Hatrock (US 4,983,086).

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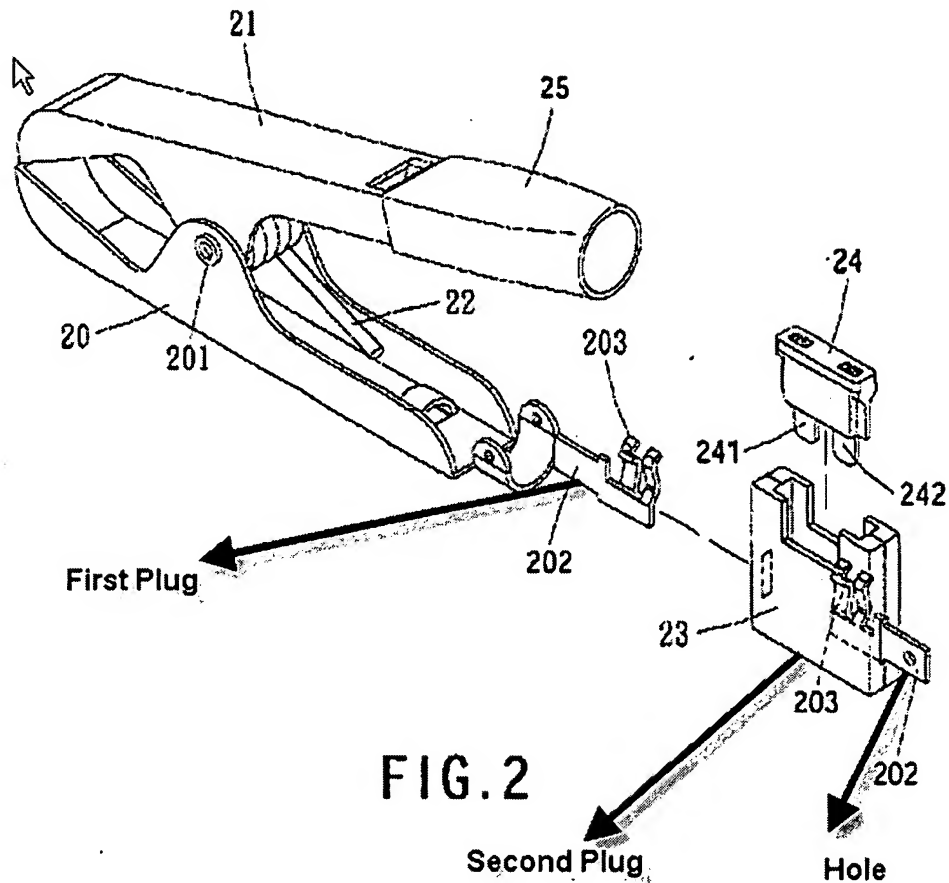
Regarding Claim 10, neither APA nor Polizzano discloses the replaceable fastener comprises a nut and bolt. However, Hatrock discloses in Figure 1, the replaceable fastener comprises a nut and bolt. It would have been obvious to use a nut and a bolt fastener means as taught by Hatrock in APA's clamp in order to provide securable fastener assembly

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Polizzano, and Johnson (4,969,834) as applied to Claim 19 above, and further in view of Vonderhaar et al. (US 6,469,511).

Regarding Claim 21, APA and Polizzano and Johnson discloses all of the claim limitations, except the first electrical conductor include two electrically isolated electrical conductor comprises a sensor lead. However, Vonderhaar et al. disclose in Figures 7 and 8 the first electrical conductor includes two electrically isolated electrical contacts which provide a Kelvin connection and the second electrical conductor comprises a sensor lead (720, Column 5, lines 10-15). It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a voltage monitoring means as taught by Vonderhaar et al. in APA's clamp assembly in order to monitor status of a batter.

9. Claims 11-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et. al. (US 6,796,841) in view of Polizzano (US 4,057,313), alternatively further in view of Morse et. al. (US 5,820,407)

Regarding Claim 11, Cheng et. al. discloses in Figure 2, an apparatus for coupling a battery charger or battery tester to a battery, comprising:



a cable (30); a first elongate clamp (20) member having a first jaw end and a first hand grip end separated by a first pivot coupling (201), the first elongate clamp member having a conductive piece coupled to the first jaw end for making contact with a contact of the battery and the first hand grip having a first hole (202) formed therein; a second elongate clamp (21) member having a second jaw end and a second hand grip end separated by a second pivot coupling, the second elongate clamp member pivotally joined to the first elongate clamp member by the first and second pivot couplings whereby the first and second

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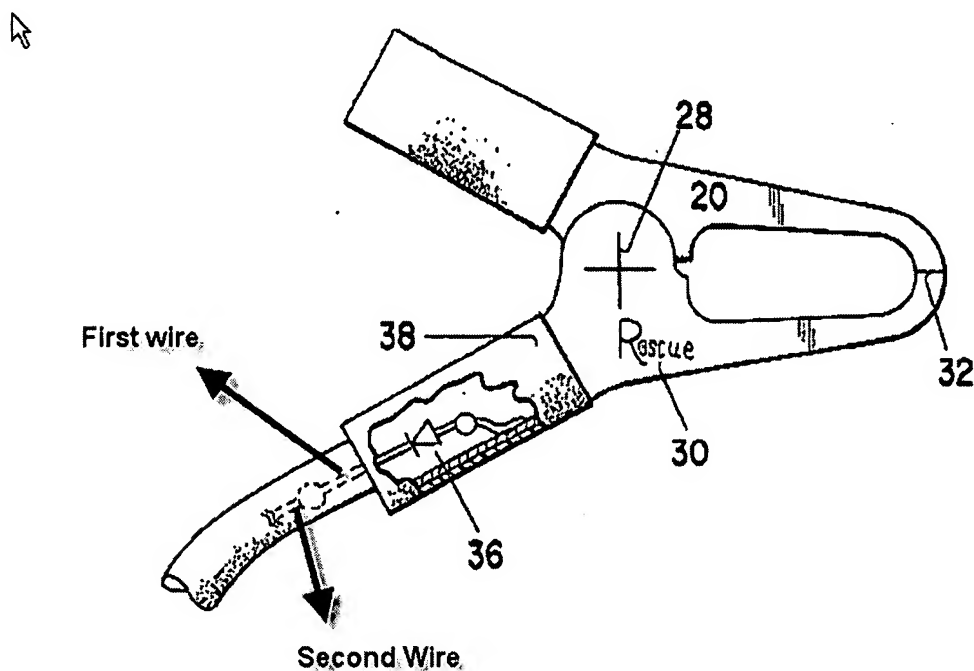
jaws are generally aligned together; first electrical plug (202) coupled to the clamp; a second electrical plug (23) coupled to the cable, wherein the first and second electrical plug removably electrically couple together and are housed in the first hand grip (noted that the above figure shows that all components are located in the handle). Cheng et. al. does not disclose explicitly, the first hand grip having a first hole formed therein and a terminal electrically coupled to the main electrical conducto having a terminal hole formed therein aligned with the first hole in the first hand grip; and a removable fastener which couples the terminal to the first hand grip through the first hole and the terminal hole whereby the first hand grip can be disconnected from the main electrical conductor.

However, Polizzano discloses in Figures 1-2, the first hand grip (28) having a first hole (the rivet 36 passes through the hole of the clamp) a terminal (the end portion of cable 34) electrically coupled to the cable (348) having a terminal hole (the pivot fastened position on the cable) formed therein aligned with the first hole in the first hand grip; and a removable fastener (36) which couples the terminal to the first hand grip through the first hole and the terminal hole whereby the first hand grip can be disconnected from the cable. It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify in Cheng 's clamp assembly and secure the cable in the handle portion with a removable fastener means as taught by Polizzano in order to ensure a reliable secure mechanical and electrical. If we were to assume that part 23 is not considered as part of the handle. Morse et. al. discloses in figure 1, and Column 4, lines 59-65, that all the components can be moved into the handle, so

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it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify Cheng's clamp and position all the components within the handle as taught by Morse et. al. in order to protect the connection from diverse weather.

Regarding Claim 12, Morse et. al. discloses in figure 1, where in the first plug is coupled to the clamp through first and second wire connectors.



Regarding Claim 13, Morse et. al. discloses, where in the second plug is electrically coupled to the cable through first and second electrical conductors of the cable.

Regarding Claim 14, Morse et. al. discloses, wherein the first and second wire connectors and the first and second electrical conductors are configured to removably electrically couple together through the first and second plugs.

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9. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et. al. (US 6,796,841) in view of Polizzano (US 4,057,313), in view of Morse et. al. (US 5,820,407), and further in view of Vonderhaar et al. (US 6,469,511).

Regarding Claim 15, Cheng et. al. , Polizzano (US 4,057,313) and Morse et. al. disclose all the claim limitations, except one of the first and second electrical connectors includes two electrically isolated electrical, conductors that provide a Kelvin connection. However, Vonderhaar et al. disclose in Figures 7 and 8, one of the first and second electrical connectors includes two electrically isolated electrical contacts that provide a Kelvin connection. It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a voltage monitoring means as taught by Vonderhaar et al. in Cheng et. al. assembly cable in order to monitor status of a battery.

Regarding Claim 16, Vonderhaar et al. disclose in Figure 7, at least one of the first and the second electrical conductors comprise a sensor lead (720, Column 5, lines 10-15).

10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et. al. (US 6,796,841) in view of Polizzano (US 4,057,313), in view of Morse et. al. (US 5,820,407) , and further in view of Hatrock (US 4,983,086).

Regarding Claim 17, Hatrock discloses, the first and second electrical conductors comprise acid-resistant connectors (Column 5, lines 9-17). It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a non-metallic acid resistant material as taught by Hatrock in

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Cheng et. al. electrical connection in order to improve life of the electrical connection.

Response to Arguments

11. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel Berhanu whose telephone number is 571-272-8430. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB



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